

A Course on

Energy Conservation

Introduction

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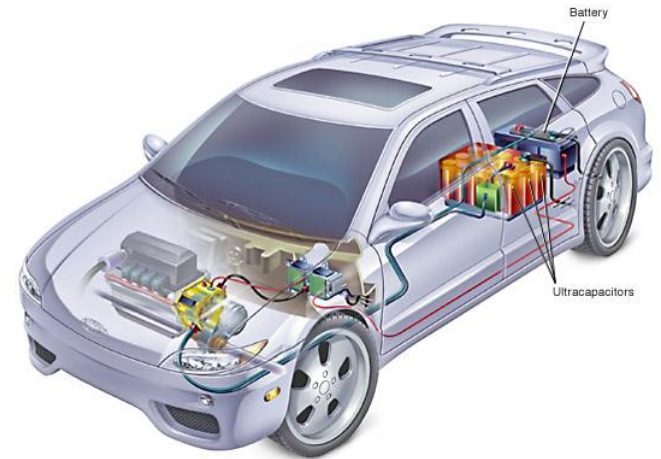


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What are the Uses of Energy?

- ▶ Energy is defined as the ability to do work.
- ▶ This include **moving** something, **lifting** something, **warming** something, or **lighting** something.



Examples

▶ Oil burns to make heat



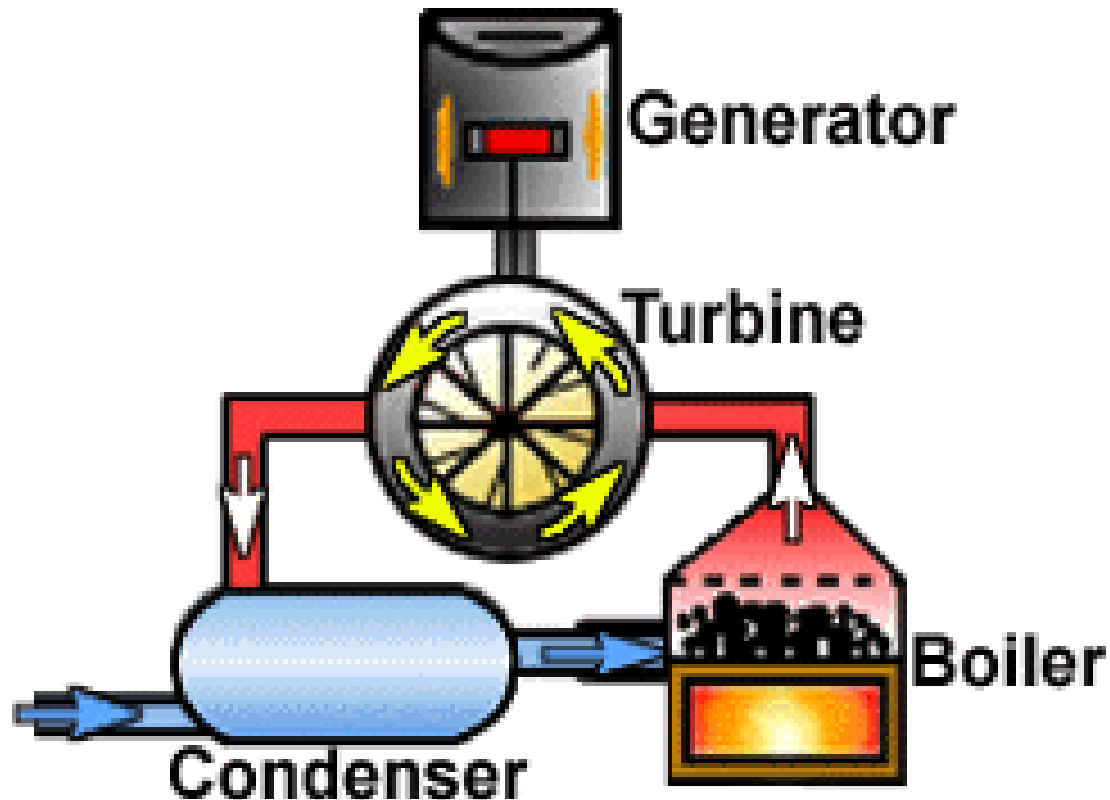
▶ Heat boils water

▶ Water turns to steam



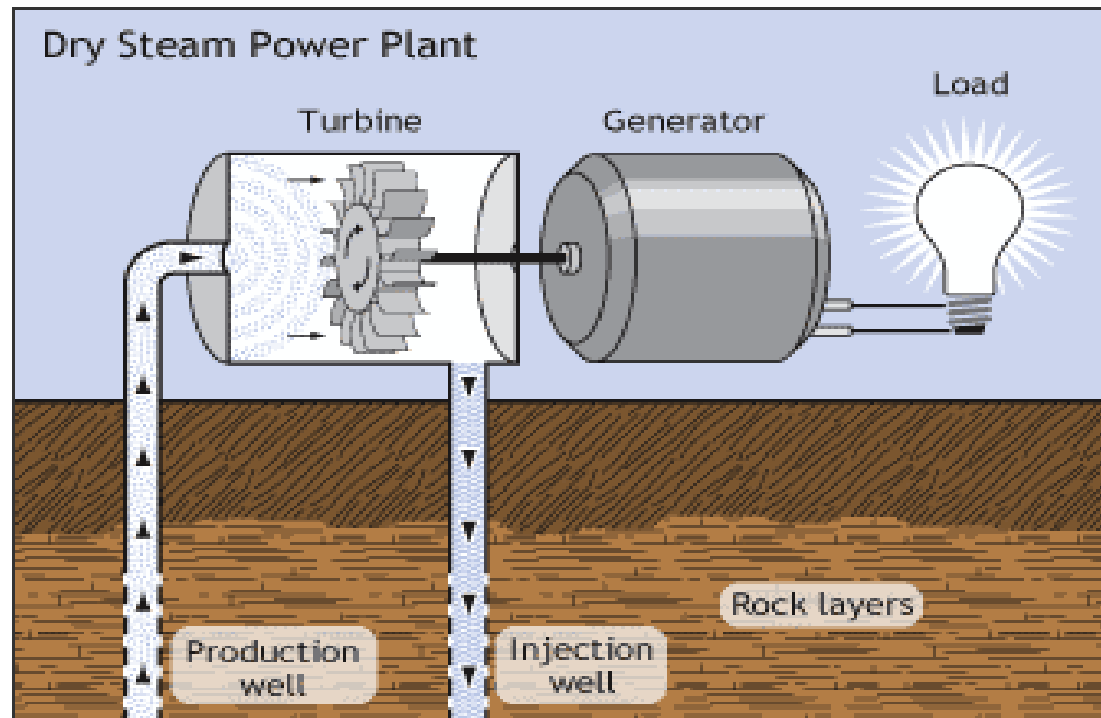
Examples

- ▶ **Steam pressure turns a turbine**
- ▶ **Turbine turns an electric generator**



Examples

- ▶ **Generator produces electricity**
- ▶ **Electricity powers light bulbs**
- ▶ **Light bulbs give off light and heat**



What is Energy Conservation?

- Our civilization runs on energy.
- Using less energy in a particular application.
- Finding ways to purchase particular forms of energy at lower cost.
- Shifting to different energy sources of lower price.
- Using "free" or "renewable" energy sources.



Why is Energy Conservation?

- ▶ **Energy conservation is one of the critical issues facing society.**
 - ▶ **The cost of energy is enormous, and the cost is rising.**
 - ▶ **Increasing demand is being made for diminishing supplies.**
 - ▶ **Utility bills account for much of the cost of housing.**
 - ▶ **A large hotel or hospital spends millions for energy each year.**
 - ▶ **This consumption brings a host of environmental dangers.**
-



High Consumption Brings a Host of Environmental Dangers.

- ▶ **Fossil fuels dump carbon dioxide into the atmosphere.**
- ▶ **Air conditioning systems release gases that destroy the earth's ozone layer.**
- ▶ **Discarded lamps contribute to mercury pollution.**



Introduction

There are different ways in which energy around us can be stored and converted for our use.

Three categories:

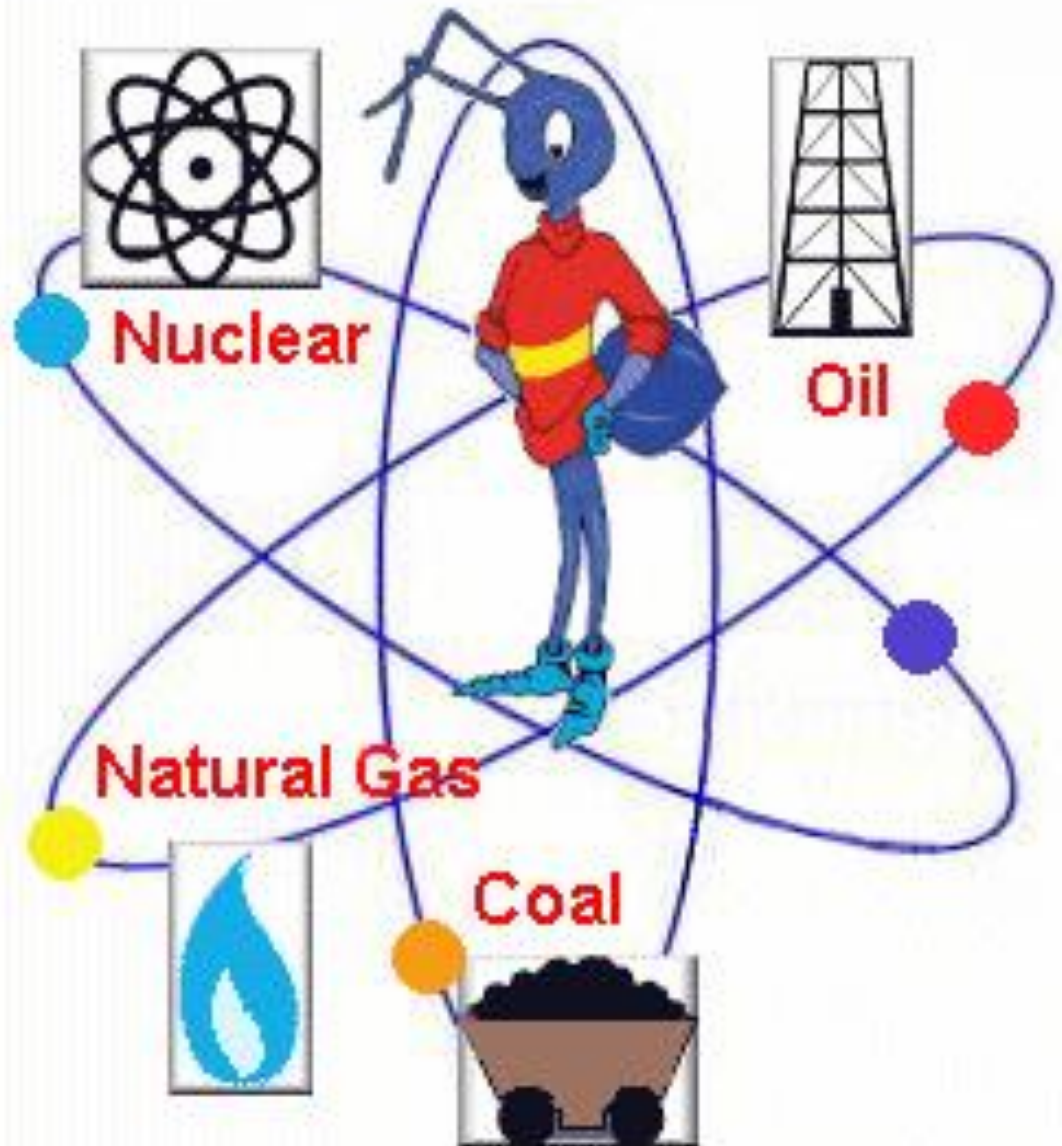
Fossil fuels

Renewable sources

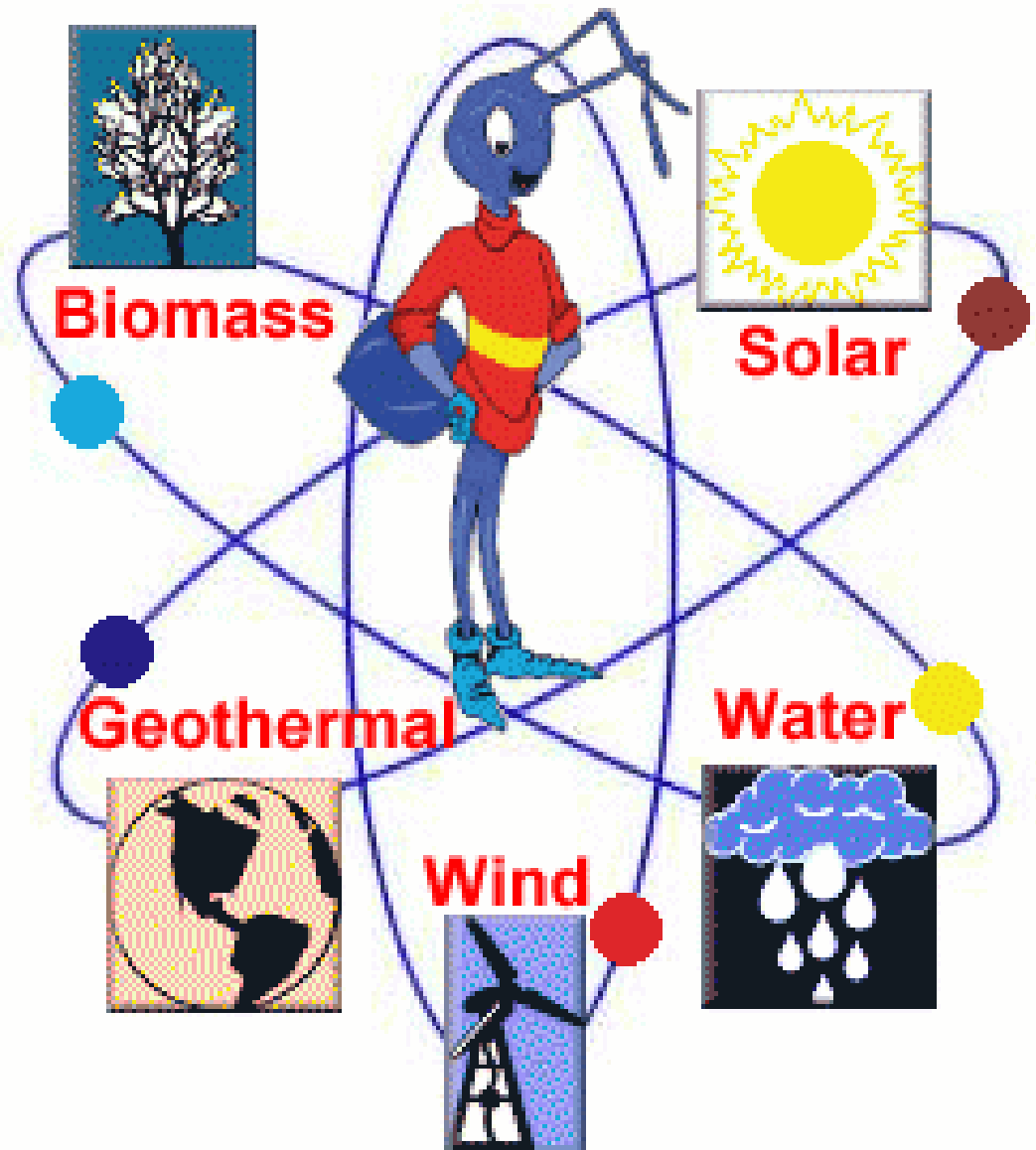
Nuclear sources.



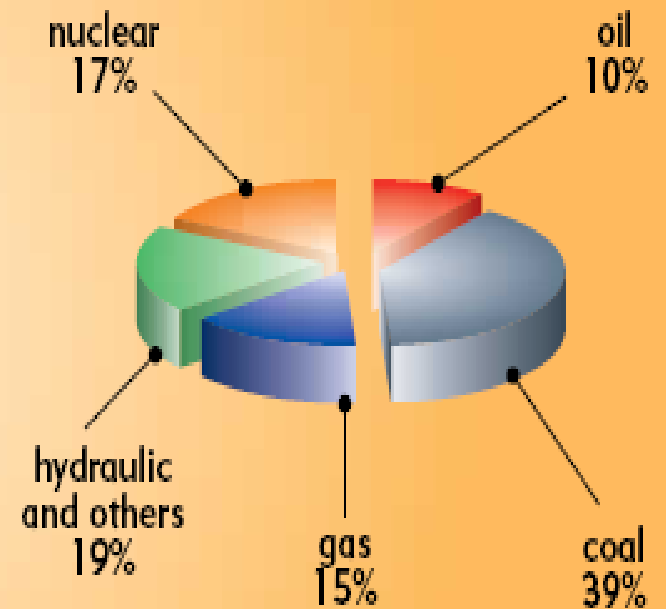
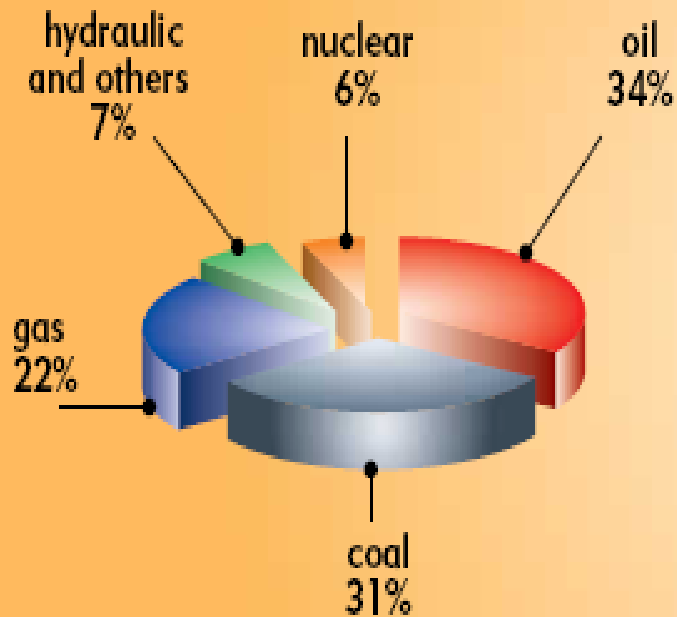
Non-renewable Energy



Renewable Energy



The Energies for Today and Tomorrow



Thank You

► Any questions ?

